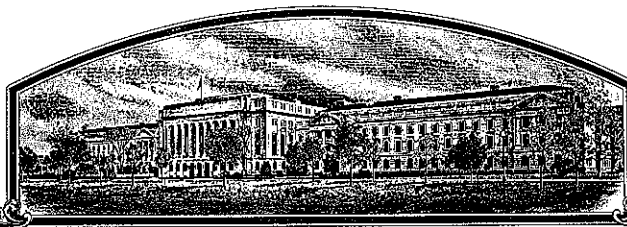


No.

9200276



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DEKALB Plant Genetics

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC FURNISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'CX248'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of May in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Kenneth H. Evans

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Jan Feltman

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) DEKALB Plant Genetics		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO.	3. VARIETY NAME CX248
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) 3100 Sycamore Road DeKalb, IL 60115		5. PHONE (include area code) 815/756-7333	FOR OFFICIAL USE ONLY PVPO NUMBER 9200276 <hr/> F I L I N G Date Sept. 22, 1992 Time 12:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M. <hr/> F E E S Filing and Examination Fee: \$2,150.⁰⁰ Date Sept. 21, 1992 <hr/> R E C E I V E D Certificate Fee: \$300.⁰⁰ Date April 25, 1995
6. GENUS AND SPECIES NAME Glycine Max	7. FAMILY NAME (Botanical) Leguminosae		
8. CROP KIND NAME (Common Name) Soybean	9. DATE OF DETERMINATION Summer 1988		
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Partnership			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION	12. DATE OF INCORPORATION		
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Robert E. Roman, Jr., Assistant General Counsel DEKALB Genetics Corporation 3100 Sycamore Road DeKalb, IL 60115			
PHONE (include area code): 815/756-7333			

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

a. ☒ Exhibit A, Origin and Breeding History of the Variety.

b. ☒ Exhibit B, Novelty Statement.

c. ☒ Exhibit C, Objective Description of Variety.

d. ☐ Exhibit D, Additional Description of Variety.

e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

f. ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office **9-17-92**

g. ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act.)
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED


18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?
☐ YES (If "YES," through ☐ Plant Variety Protection Act. ☐ Patent Act. Give date: _____) ☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?
☒ YES (If "YES," give names of countries and dates) **U.S.A., February 1992** ☐ NO

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT [Owner(s)] 	CAPACITY OR TITLE President	DATE 9/8/92
SIGNATURE OF APPLICANT [Owner(s)]	CAPACITY OR TITLE	DATE

Origin and Breeding History

CX248 is an F3 plant selection from the cross Asgrow A3127 x Williams 79) M0296.

Summer 1983 Cross A3127 x Williams 79)M0296
Winter 1983-84 F1 and F2 generations grown
Summer 1984 F3 bulk populations grown
Summer 1985 F4 rows, row number 164 selected

Seed from the F4 plant row was bulked and yield tested in 1987-1991. Seed increases occurred in 1987 (100 lbs.), 1988 (3,800 lbs.), 1989 (15,000 lbs.), 1990 (50,000 lbs.), and 1991 (50,000 lbs.).

During this time the variety has undergone purification and has been observed by the breeder to be uniform and stable for all plant traits from generation to generation with no evidence of variants other than those due to mutation or environment.

The variety was given the name CX248 and released in the spring of 1992.

EXHIBIT B

Novelty Statement

CX248 is most similar to DEKALB CX267; however, CX248 has white flowers and buff hila whereas CX267 has purple flowers and gray hila.

EXHIBIT E

Statement of the Basis of Applicant's Ownership

DEKALB Plant Genetics is the sole, original, and first breeder of the soybean variety CX248.

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) DEKALB PLANT GENETICS	TEMPORARY DESIGNATION	VARIETY NAME CX248
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 3100 SYCAMORE ROAD DEKALB, IL 60115		FOR OFFICIAL USE ONLY PVPO NUMBER 9200276

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Consoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a) 2 = Type B (SP1^b)

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☐ 21 = Light Green ('Weber'; 'York')
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

★ 13. FLOWER COLOR:

☐ 1

1 = White

2 = Purple

3 = White with purple throat

★ 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

★ 15. PLANT PUBESCENCE COLOR:

☐ 1

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 11 = Slender ('Essex'; 'Amsoy 71')
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

★ 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

☐ 05

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★

☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)

★

☐ 0Bacterial Blight (*Pseudomonas glycinea*)

★

☐ 0Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)

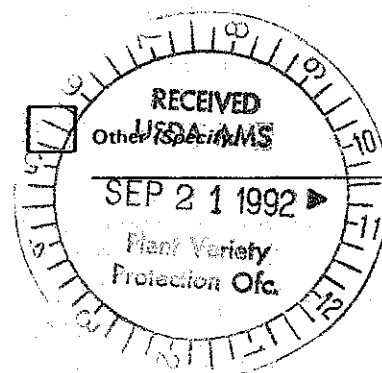
★

☐ 0

Race 1

☐ Race 2☐ Race 3☐ Race 4☐ Race 5☐ 0Target Spot (*Corynespora cassiicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0Powdery Mildew (*Microsphaera diffusa*)

★

☐ 0Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

- ★ ☒ 1 Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)
☒ 2 Purple Seed Stain (*Cercospora kikuchii*)
☒ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
 Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
 ★ ☒ 2 Race 1 ☒ 2 Race 2 ☒ 2 Race 3 ☒ 1 Race 4 ☒ 1 Race 5 ☒ 2 Race 6 ☒ 2 Race 7
☒ 2 Race 8 ☒ 2 Race 9 ☐ Other (Specify) 10, 11, 13, 15, 17, 21, 23, 24, 26 Rps1c

VIRAL DISEASES:

- ☒ 0 Bud Blight (Tobacco Ringspot Virus)
☒ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)
 ★ ☒ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)
☒ 0 Pod Mottle (Bean Pod Mottle Virus)
 ★ ☒ 2 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
 ★ ☒ 1 Race 1 ☒ 1 Race 2 ☒ 1 Race 3 ☒ 1 Race 4 ☐ Other (Specify) _____
☒ 0 Lance Nematode (*Hoplolaimus Colombus*)
 ★ ☒ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)
 ★ ☒ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
☒ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
☒ 0 Reniform Nematode (*Rotylenchulus reniformis*)
☐ OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☒ 1 Iron Chlorosis on Calcareous Soil
☐ Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☒ 0 Mexican Bean Beetle (*Epilachna varivestis*)
☒ 0 Potato Leaf Hopper (*Empoasca fabae*)
☐ Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	DEKALB CX267	Seed Coat Luster	DEKALB CX267
Leaf Shape	DEKALB CX267	Seed Size	DEKALB CX267
Leaf Color	DEKALB CX267	Seed Shape	DEKALB CX267
Leaf Size	DEKALB CX267	Seedling Pigmentation	DEKALB CX291

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23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Submitted CX248	-2	1.5	90			35.5	18.6	17.5	3
Name of Similar Variety	0	2.4	97			34.0	19.4	17.6	3

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

